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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/743,002	11/01/1996	HERBERT DAMSOHN	027/43042	3122

7590 09/23/2003

CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER

LEO, LEONARD R

ART UNIT	PAPER NUMBER
3743	

DATE MAILED: 09/23/2003

40

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No. 08/743,002	Applicant(s) Damsohn et al.
Examiner Leonard R. Leo	Art Unit 3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on Jun 20, 2003.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) Claim(s) 22, 31, and 38 is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 22, 31, and 38 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) The translation of the foreign language provisional application has been received.

15) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) Other: _____

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DETAILED ACTION

The amendments filed March 4 and June 20, 2003 have been entered. Claims 32 and 34-35 are cancelled, and claims 22, 31 and 38 are pending.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 22 and 38 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 6,321,835 in view of Kim.

The patent claims a plurality of rectangular tubes for exhaust gas flow; a plurality of internal V-shaped lugs and spacing elements (i.e. external or outward projections) for adjacent tube spacing; a jacket (i.e. sheet metal, column 3) having a coolant inlet and outlet; but does not claim latticed tube bottoms.

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Kim discloses a tube and shell heat exchanger comprising a plurality of tubes 1 welded to preformed latticed tube bottom 2 for the purpose of providing a strong fluid tight manifold.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the patent welded latticed tube bottoms for the purpose of providing strong fluid tight manifolds as recognized by Kim.

Claim 31 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 6,321,835 in view of Kim as applied to claims 22 and 38 above, and further in view of Brzezinski or Scala.

The combined teachings of the patent and Kim lacks welded lugs.

Brzezinski discloses a heat exchanger comprising a tube 1 having opposed walls 8, 9 and a turbulinating insert 5 with lugs 15 thereon; wherein the prior art welded the lugs directly to the tube walls (column 1, lines 57-64) for the purpose of minimizing material and weight of the heat exchanger.

Scala discloses a heat exchanger comprising a tube 10 having opposed walls 20, 24 and turbulinating lugs 25-27 welded thereon for the purpose of minimizing material and weight of the heat exchanger.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in the patent welded lugs for the purpose of minimizing material and weight of the heat exchanger as recognized by Brzezinski or Scala.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22, 31 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karbach et al in view of Brzezinski and Kim.

Karbach et al discloses all the claimed limitations except lugs directly attached to the tube walls and latticed tube bottoms.

Brzezinski discloses a heat exchanger comprising a tube 1 having opposed walls 8, 9 and a turbulating insert 5 with lugs 15 thereon; wherein the prior art welded the lugs directly to the tube walls (column 1, lines 57-64) for the purpose of minimizing material and weight of the heat exchanger.

Kim discloses a tube and shell heat exchanger comprising a plurality of tubes 1 welded to preformed latticed tube bottom 2 for the purpose of providing a strong fluid tight manifold.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Karbach et al welded lugs for the purpose of minimizing material and weight of the heat exchanger as recognized by Brzezinski, *and* latticed tube bottoms receiving a plurality of tubes for the purpose of providing a fluid tight manifold as recognized by

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Kim. In the combination, Karbach et al discloses insert 12 (Figure 1a and 2-3) providing upper and lower lugs 21, 22 on opposite tube walls 13. The modification as taught by Brzezinski would “directly attach” the lugs on opposite tube wall, in order to not to destroy the primary reference of Karbach et al.

Claims 22, 31 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Karbach et al in view of Scala and Kim.

Karbach et al discloses all the claimed limitations except lugs directly attached to the tube walls and latticed tube bottoms.

Scala discloses a heat exchanger comprising a tube 10 having opposed walls 20, 24 and turbulating lugs 25-27 welded thereon for the purpose of minimizing material and weight of the heat exchanger.

Kim discloses a tube and shell heat exchanger comprising a plurality of tubes 1 having spacing elements 3 and welded to preformed latticed tube bottom 2 for the purpose of providing a strong fluid tight manifold.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Karbach et al welded lugs for the purpose of minimizing material and weight of the heat exchanger as recognized by Scala, *and* latticed tube bottoms receiving a plurality of tubes for the purpose of providing a fluid tight manifold as recognized by Kim. In the combination, Karbach et al discloses insert 12 (Figure 1a and 2-3) providing upper and lower lugs 21, 22 on opposite tube walls 13. The modification as taught by Scala would

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“directly attach” the lugs on opposite tube wall, in order to not to destroy the primary reference of Karbach et al.

Response to Arguments

The rejection in view of Peze et al is withdrawn in light of the cancellation of “spacing elements” in the claims. .

The obvious double patenting rejection is maintained. Although the Damsohn et al patent claims a device, the method claims of the instant application are believed met. In fact, the instant method claims merely recite generalized method steps, such as “providing, arranging and attaching.” To this extent, the device of the Damsohn et al patent claims recites “rectangular tubes being provided,” “lugs being arranged on half shells (i.e. opposite walls formed by two half shells),” “a jacket being attached to the bundle (sheet metal by disclosure),” “a coolant inlet and outlet being provided (claim 1 or by disclosure in claim 2),” and “connections being attached to the jacket (by disclosure).” The only specific method steps recite “welding ends of said rectangular tubes to said latticed tube bottoms” in claim 22 and “the lugs are welded” in claim 31. These specific method steps are met by the secondary references of Kim and Brzezinski or Scala.

The secondary reference of Kim discloses “welding” tubes in preformed latticed bottoms in a tube and shell heat exchanger for the purpose of providing a strong fluid tight manifold. Applicants do not dispute this fact, rather applicants argue Kim does not teach or

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suggest the generalized method steps of the instant claims, which the patent claims of Damsohn et al are relied upon to disclose.

The rejection in view of the secondary reference of Brzezinski or Scala is believed correct for lack of any arguments by applicants.

The rejection under 35 USC 103 is believed correct for lack of any specific arguments with respect to the applied prior art. As noted above with respect to the obvious double patenting rejection, the structure in the device of the combination of Karbach et al, Kim and Brzezinski or Scala is believed assembled in same general method steps as in the instant claimed invention. The secondary reference of Kim teaches the specific welding step of the tubes to the latticed bottom. The secondary reference of Brzezinski or Scala teaches the specific welding of the lugs to the inner surface of the tubes as in claim 31.

No further comments are deemed necessary at this time.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

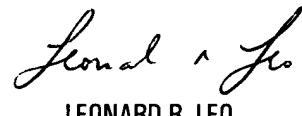
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to

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37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648.

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3743

September 21, 2003